

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P589431

Luminaire Tested: **FMR-24-2-LD4-3LO-50-UNV-80-86-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589431
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FMR-24-2-LD4-3LO-50-UNV-80-86-EDD
Description: 2X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

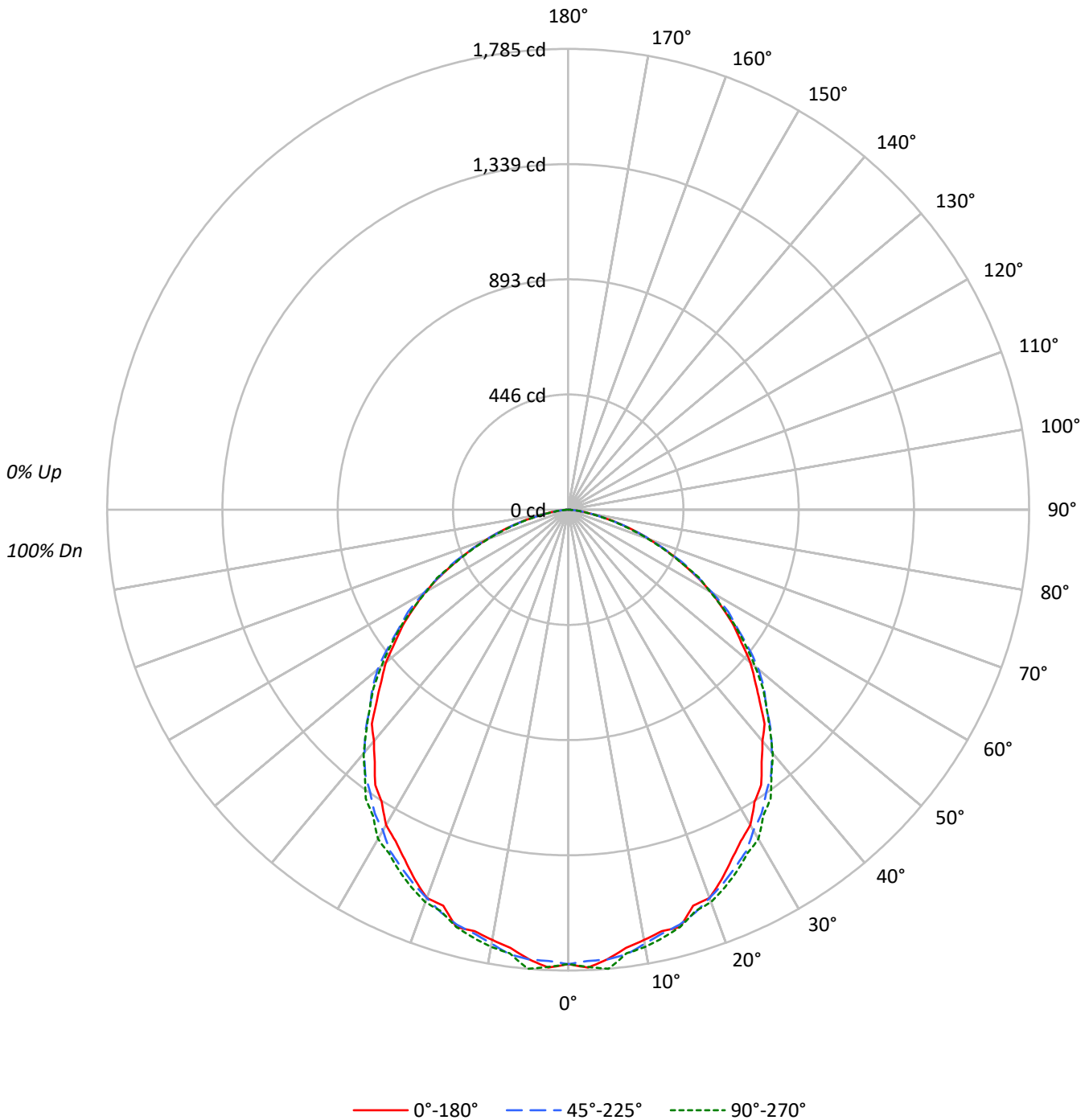
Lumens per Lamp: N/A
Luminaire Lumens: 4436.0 lumens
Efficiency: N/A
Efficacy: 126.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 35.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT

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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4736	4736	4736
5°	4721	4723	4822
10°	4625	4665	4698
15°	4662	4636	4662
20°	4583	4583	4632
25°	4442	4539	4589
30°	4381	4458	4576
35°	4278	4390	4488
40°	4111	4309	4329
45°	3987	4129	4135
50°	3856	4030	3953
55°	3674	3745	3719
60°	3436	3470	3407
65°	3063	3142	3042
70°	2629	2637	2564
75°	2082	2077	1996
80°	1395	1356	1303
85°	756	750	701



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	165.6	3.7
10°-20°	469.2	10.6
20°-30°	703.0	15.8
30°-40°	833.2	18.8
40°-50°	834.7	18.8
50°-60°	708.6	16.0
60°-70°	477.7	10.8
70°-80°	209.9	4.7
80°-90°	34.1	0.8
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1337.8	30.2
0°-40°	2171.0	48.9
0°-60°	3714.3	83.7
0°-90°	4436.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4436.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1760	1760	1760	1760	1760	
5°	1748	1744	1748	1743	1785	165
15°	1673	1654	1664	1673	1674	466
25°	1496	1504	1529	1549	1546	692
35°	1302	1306	1336	1367	1366	809
45°	1048	1067	1085	1113	1086	810
55°	783	778	798	793	793	697
65°	481	475	493	474	478	478
75°	200	196	200	186	192	215
85°	24	24	24	24	23	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1760.1	1760.1	1760.1	1760.1	1760.1
2.5°	1775.3	1761.9	1749.4	1764.0	1772.8
5°	1747.6	1743.5	1748.3	1743.0	1785.1
7.5°	1711.7	1727.4	1736.5	1730.8	1733.3
10°	1692.6	1687.1	1707.4	1721.5	1719.4
12.5°	1672.1	1680.3	1681.5	1696.7	1698.1
15°	1673.3	1654.0	1664.2	1672.8	1673.5
17.5°	1608.3	1629.2	1636.2	1656.0	1631.5
20°	1600.3	1585.1	1600.3	1620.6	1617.4
22.5°	1551.5	1534.4	1567.2	1585.1	1584.0
25°	1496.0	1504.2	1528.7	1548.7	1545.6
27.5°	1447.4	1456.9	1491.9	1519.4	1501.7
30°	1409.9	1405.1	1434.7	1459.2	1472.8
32.5°	1342.9	1360.1	1394.7	1419.0	1406.0
35°	1302.2	1306.0	1336.3	1367.2	1366.3
37.5°	1231.0	1249.0	1291.5	1300.1	1292.2
40°	1170.4	1188.3	1226.7	1236.0	1232.2
42.5°	1125.6	1128.8	1161.7	1172.4	1155.4
45°	1047.6	1067.2	1084.9	1112.9	1086.5
47.5°	981.3	990.4	1028.6	1036.1	1022.2
50°	921.1	924.2	962.7	953.3	944.2
52.5°	845.4	858.8	880.4	878.6	867.9
55°	783.1	777.9	798.3	792.9	792.7
57.5°	708.4	717.4	734.3	725.6	711.8
60°	638.4	638.6	644.7	635.0	633.1
62.5°	560.4	563.1	564.5	552.5	572.0
65°	481.1	474.7	493.4	474.5	477.7
67.5°	408.2	411.3	409.5	397.7	402.2
70°	334.1	338.2	335.2	321.8	325.9
72.5°	266.3	261.3	264.5	247.7	255.4
75°	200.2	196.1	199.8	185.7	192.0
77.5°	136.4	139.5	137.3	129.8	134.1
80°	90.0	87.5	87.5	83.2	84.1
82.5°	52.5	50.0	49.3	48.0	50.0
85°	24.5	23.9	24.3	23.6	22.7
87.5°	8.9	9.1	9.1	8.6	8.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)